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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/424,623	03/27/2000	ANTTI TOSKALA	297-009040-U	8253

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CLARENCE A GREEN
PERMAN & GREEN
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FAIRFIELD, CT 06430

EXAMINER

AHN, SAM K

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/424,623

Applicant(s)

TOSKALA ET AL.

Examiner

Sam K. Ahn

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-7 and 15 is/are allowed.
- 6) ☒ Claim(s) 8,9,12,13 and 16 is/are rejected.
- 7) ☒ Claim(s) 10,11 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/26/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see p,9-11, filed on 07/14/04, with respect to the rejection(s) of claim(s) 6 and 15 under 102(e) and 103(a), respectively, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Saito.

Specification

2. For the formality of the application under the present office practice, applicant(s) is required to replace "Claims" with "I or We Claim", "The Invention Claimed Is" (or the equivalent) before the Claims part of the specification of the instant application. See MPEP 608.01(m).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8,9,12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (cited previously).

Regarding claims 8,12 and 16, Saito teaches a radio apparatus and a method comprising a diversity receiver (see Fig.8) which has a first reception branch (33,

35, 38, 39, 42 and 61) and a second reception branch (34, 44, 46, 45, 47, 48 and 62) (also note col.9, lines 7-61), a rake receiver (see Fig.6 and note col.8, lines 13-30) comprising correlator branches (840~84n) for combining received signal components on baseband frequency, and a measuring receiver for making measurements (63, receiving and measuring electric field intensity, note col.10, lines 16-36), characterized in that it is arranged so as to tune the first reception branch to a different frequency than the second reception branch and to make measurements of a signal produced by one reception branch simultaneously with the reception of a signal produced by the other reception branch. (note col.9, lines 7-61 wherein the first and second branches pass only first and second frequency, respectively, simultaneously measure the received signal)

Although, Saito does not explicitly teach wherein tuning of the at least one reception branch of the diversity receiver to other than the operating frequency is timed according to a certain predetermined timetable which is known to a transmitter apparatus transmitting at the operating frequency, Saito teaches wherein tuning of the at least one reception branch (note above) of the diversity receiver to other than the operating frequency is timed according to a predetermined time slot, which is known to a transmitter apparatus transmitting at the operating frequency, (see Fig.3B and note col.10, lines 16-64, and note col.11, lines 21-29). The slots indicate the time a mobile station would transmit (using f_1) and receive (using f_2) assigned by the base station, wherein f_2 is measured by the at least one reception branch. Therefore, it would have been

obvious to one skilled in the art at the time of the invention to use time slots rather than a timetable, since time slots are also predetermined, the base station may transmit and receive with mobile stations more efficiently as constant retrieval of data from the timetable may not be necessary. For the purpose of efficient operation, one skilled in the art may implement assigning time slots, as taught by Saito, than to look up a timetable for each of the next time of signal measurements.

Regarding claim 9, Saito teaches all subject matter claimed, as applied to claim 8. Saito further teaches wherein the transmitter apparatus transmitting at the operating frequency is also requested to transmit at a higher power during the time that at least one branch of the diversity receiver is tuned to other than the operating frequency. (note col.11, line 30 – col.12, line 16, wherein mobile station moving to different area requests to increase power by transmitting the detection information, thus is assigned to a different time slot, and increasing power.

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (cited previously) in view of Wan, USP 6,680,920 B1.

Regarding claim 13, Saito teaches all subject matter claimed, as applied to claim 8. Although Saito teaches at least one branch of the diversity receiver tuning to other than the operating frequency, as explained above, Saito does not explicitly teach in regards to the limitation of bit errors being corrected by an interleaver,

Wan teaches power management of a mobile station and further teaches wherein interleaving is implemented to correct bit transmission errors (note col.10, lines 6-20). Therefore, it would have been obvious to one skilled in the art at the time of the invention to include interleaving in Saito's system for the purpose of reducing bit errors to combat against noise and interference, as recited in claim 14.

Allowable Subject Matter

5. Claims 2-7 and 15 are allowable.
6. Claims 10,11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter:

Present application discloses a diversity receiver comprising rake receiver and a measuring block in the rake receiver for measuring impulse response of the signal received. Prior arts, Saito, teach in the same field of endeavor, comprising common elements recited. However, prior art does not teach or suggest in combination of the reception branches comprised in a certain configuration with all the elements of filters, mixers, and a switch. Furthermore, Saito does not teach the transmission of the request for power adjustment as recited in claims 10 and 11, and does not teach the interval of timetable between consecutive tunings of at least one branch of the

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diversity receiver to other than the operating frequency being inversely proportional to a relative received power.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam K. Ahn
11/1/04


BETSY L. DEPPE
PRIMARY EXAMINER